

Amendments to the Specification:

Please replace the paragraph on Page 27 that spans lines 11-22 with the following replacement paragraph:

In the first step DNA of interest (SEQ ID NO:1) is chemically treated to yield the sequence shown in the second row (SEQ ID NO:2), wherein the only cytosines remaining in the sequence are those that were methylated in the original sample. PCR primers (shown in the third row, SEQ ID NO:3) designed to target one of the DNA strands anneal to the template (SEQ ID NO:2) and extend it by incorporating labeled nucleotides (dGTP) to yield SEQ ID NO:4. The labeled dGTP is incorporated only where there was a methylated cytosine in the original DNA sample. After the extension phase, the DNA (SEQ ID NO:2, sixth row) is denatured, allowed to reanneal with primers (SEQ ID NO:5, left, and SEQ ID NO:6, right) and the fluorescence monitored. With each round of PCR, more targets complementary to the probe accumulate. The amount of fluorescence emitted from the probe is measured.

Please replace the paragraph bridging Pages 27 and 28 with the following replacement paragraph:

A PCR is performed with primers that target one of the DNA strands (SEQ ID NO:7, first row, and SEQ ID NO:8, second row). The first primer (SEQ ID NO:9, third row) anneals to the template (SEQ ID NO:8, fourth row) and extends it by incorporating the appropriate nucleotides. One of the nucleotides, in this case dGTP, is labeled with a fluorescent dye. A sequence-specific oligonucleotide probe hybridizes to the site of interest of SEQ ID NO:9 to afford SEQ ID NO:10, fifth row. If the labeled guanine is present (SEQ ID NO:10, last row), a FRET reaction occurs. The

energy emitted from the guanine is transferred to the label on the probe. The energy emitted from the probe is detected by real-time fluorescence detection.